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ANNOTATED CHECKLIST OF THE THYSANOPTERA OF BERMUDA

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Abstract.—Thirty-eight introduced species of thrips representing 28 genera in three families are known from Bermuda. The species were apparently introduced from eastern North America or the Caribbean region, except for three species. Hosts, collection data and world distribution are presented for each species and the economic importance of several species is mentioned.

Bermuda is a small archipelago in the North Atlantic located at 32°18′N latitude, 64°46′W longitude. Seven main islands and numerous smaller ones lie in a fish hook-shaped cluster. The closest land is Cape Hatteras, North Carolina, U.S.A., 1,040 km to the west northwest. Bermuda's total land area is approximately 53 km_2 with a maximum elevation of only 74 m. The climate is mild and frost free due to the nearby Gulf Stream. Rainfall is distributed fairly evenly throughout the year and averages 1,420 mm annually. Vegetation is lush and subtropical. The island is densely populated with approximately 60,000 residents.

Due to its small size and isolation, Bermuda's native terrestrial flora and fauna are depauperate. There are few endemic species. Most species originated from southeastern North America or the Caribbean region and were introduced accidentally by human activity.

Kevan (1981) presented a historical review of the terrestrial arthropods in Bermuda, from the earliest mention of insects in 1603 through 1900. Ogilvie (1928) published a list of Bermuda's insects, which contained six species of Thysanoptera (thrips). Eleven additional species were reported by Waterston (1940, 1941), and one species each by Wilson (1975), Bennett et al. (1985) and Nakahara (1985).

The Bermuda Department of Agriculture and Fisheries (BDAF) has maintained an insect collection since 1928. Specimens collected by Lawrence Ogilvie between 1923 and 1927 formed the nucleus of this collection. Since then, additions to the collection have been sporadic. Major contributions were made by Idwal Hughes between 1954 and 1975 and Francis Monkman between 1964 and 1971. A permanent position for an entomologist with the official title of Plant Protection Officer was created in 1983. Kevin Monkman, the first to hold this post, made additions between 1983 and 1986. In 1987 a project was initiated by the junior author to upgrade the collection. Specialists in various insect groups were invited to study the collection and to survey the island for additional material. Since then, many unreported species have been found and the collection has been enlarged by addition of hundreds of specimens collected in the surveys.

The thrips in the BDAF collection were examined by the senior author in June

1988 in conjunction with a joint survey of the islands by the authors. Twelve species were found for the first time in Bermuda during the survey. Thirty-eight introduced species representing 28 genera in three families are now known from Bermuda. The species were apparently introduced from eastern North America or the Caribbean region, except for *Asprothrips seminigricornis* (Girault), *Dorcadothrips caespitis* Priesner and *Hercinothrips bicinctus* Bagnall. In addition to the species collected in the survey, the following list includes species and host plants reported by Ogilvie (1928), Waterston (1940, 1941), Wilson (1975), Bennett et al. (1985) and Nakahara (1985); species collected by various collectors but not reported in the literature; and material deposited in the United States Museum of Natural History (USNM). The 20 species reported for the first time for Bermuda are indicated with asterisks. Species and host-plant records reported by Waterston (1940, 1941), which were based mainly on quarantine interceptions at United States (US) ports of entry on cutflowers and plants from Bermuda, were not verified. Voucher specimens are deposited in the Bermuda Natural History Museum, which now houses the main portion of the BDAF collection, and the Thysanoptera collection of the USNM located at Beltsville, Maryland.

AEOLOTHRIPIDAE

Aeolothrips fasciatus (L.)*

'Waterville,' Paget, *Chrysanthemum frutescens,* 19-VI-88, S. Nakahara. Ferry Point Park, St. George's, *Cakile lanceolata,* 24-VI-88, S. Nakahara. Botanical Gardens, Paget, sweeping, 26-VI-88, D. Hilburn. Spittal Pond Nature Reserve, Smith's, sweeping, 27-VI-88, D. Hilburn.

Preys on thrips, aphids, beetles and other insects (Lewis, 1973:299); species known from Europe, Canada and US.

Franklinothrips vespiformis (D. L. Crawford)*

Gilbert Nature Reserve, Somerset, *Citharexylum spinosum,* 20-VI-88, D. Hilburn & S. Nakahara. Shelly Bay Park, Hamilton, *Schinus terebinthifolius,* 22-VI-88, S. Nakahara. Botanical Gardens, Paget, Araceae, *Vitis* sp., 23-VI-88, D. Hilburn & S. Nakahara; *Rosa* sp., 23-VI-88, D. Hilburn; sweeping, 26-VI-88, D. Hilburn.

A predator in tropical and subtropical areas of the New World that feeds on thrips, red spider mites, whiteflies and leafhoppers (Stannard, 1952:16).

PHLAEOTHRIPIDAE

Aleurodothrips fasciapennis Franklin

Waterston, 1940:6, 1941:51.

Paget Marsh, Paget, *Sabal blackburniana,* 24-I-33, T. A. Russell.

A predator of armored scale insects (Lewis, 1973:299) occurring in US from Florida to Texas, Caribbean Islands and Central America.

Eurythrips modestus (Bagnall)*

Spittal Pond, Smith's, sweeping, 27-VI-88, D. Hilburn.

Reported from Cuba, St. Vincent, Trinidad, Panama, and Brazil.

Gynaikothrips ficorum (Marchal)

Bennett et al., 1985:120.

A common species causing leaf distortion and curling of *Ficus microcarpa.* Extremely abundant during May and June and a nuisance to residents. First collected in Bermuda, 3-I-50, by E. C. G. Bedford. A widespread species known from the tropics and subtropics on *Ficus.*

Haplothrips gowdeyi (Franklin)

Haplothrips dozieri Watson: Waterston, 1940:7, 1941:16. *Haplothrips gowdeyi* (Franklin): Waterston, 1940:7, 1941:16, 28, 35, 42.

Stoke's Point Nature Reserve, St. George's, *Bidens pilosa,* 25-III-88, M. B. Stoetzel & D. Hilburn. 'Waterville' area, Paget, *Carpobotrus edulis,* 19-VI-88, S. Nakahara. Spittal Pond Nature Reserve, Smith's, unknown composite, 21-VI-88, D. Hilburn; *Bidens* sp., 21-VI-88, S. Nakahara & P. Stevens. 'Locust Hall,' Devonshire, grass, 21-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Shelly Bay Park, Hamilton, grass, 22-VI-88, P. Stevens & D. Hilburn. Botanical Gardens, Paget, *Citharexylum spinosum,* 23-VI-88, D. Hilburn & S. Nakahara. Ferry Point Park, St. George's, grass, 24-VI-88; D. Hilburn.

According to Waterston, *H. dozieri* was intercepted in the US on *Chrysanthemum* from Bermuda in 1923, and *H. gowdeyi* was intercepted in the US in 1936, 1938 and 1939 on *Chrysanthemum* sp., *Freesia refracta, Lathyrus odoratus* and *Nerium oleander* from Bermuda. Quarantine interceptions made at New York and Boston from Bermuda on *Gerbera* sp., *Lilium longiflorum* and pampas grass are deposited in the USNM. A cosmopolitan species in the tropics and subtropics.

Haplothrips kurdjumovi Karny

Nakahara, 1985:894.

Intercepted at predeparture quarantine inspection at Bermuda: *Passiflora* sp. flowers, 13-VII-68, A. Kaplan & J. Fons; *Lonicera* sp., 1-VII-69, G. Holt; cutflowers, 21-VI-70, J. Fons; *Passiflora* sp. flower, 17-VII-70, J. Fons. Hamilton, Pembroke, *Ipomoea villosa,* 23-III-88, M. Mello. 'Waterville' area, Paget, *Chrysanthemum frutescens, Carpobotrus edulis, Duranta repens, Ipomoea villosa, Lonicera* sp., *Nasturtium officinale, Pimenta officinale,* 19-VI-88, S. Nakahara. Admiralty House Park, Pembroke, *Solidago* sp., 20-VI-88, S. Nakahara. Gilbert Nature Reserve, Sandy's, *Carissa grandiflora,* 20-VI-88, D. Hilburn & S. Nakahara. 'Garthowen Estate,' Devonshire, *Persea americana,* 22-VI-88, D. Hilburn; *Dianthus caryophyllus, Sambucus* sp., S. Nakahara. Shelly Bay Park, Hamilton, *Tamarix* sp., 22-VI-88, S. Nakahara. 'Windy Bank Farm,' Smith's, *Bromus* sp., 22-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Jubilee Road, Devonshire, *Clerodendron* sp., 22-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Botanical Gardens, Paget, pan trap, 27-III-88, M. B. Stoetzel; *Citharexylum spinosum, Punica granatum, Rosa* sp., *Vitis* sp., 23-VI-88, D. Hilburn & S. Nakahara. Ferry Point Park, St. George's, *Jasminum* sp., 24-VI-88, S. Nakahara. Paget, *Phaseolus vulgaris,* 24-VI-88, D. Hilburn & S. Nakahara.

A predator of mites and moth eggs in Europe, Canada and eastern United States.

Hoplandrothrips sp.*

Shelly Bay Park, Hamilton, *Tamarix* sp., 22-VI-88, S. Nakahara.

Hoplothrips marginalis (Hood & Williams)

Trichothrips marginalis Hood & Williams: Waterston, 1941:6.

Quarantine interception in the US in 1933 on *Antirrhinum majus*; known from southeastern United States.

Karnyothrips flavipes (Jones)*

Shelly Bay Park, Hamilton, grass, 22-VI-88, D. Hilburn & P. Stevens.

A cosmopolitan predator of scale insects, whiteflies and mites (Pitkin, 1976:263) in tropical and subtropical regions.

Karnyothrips longiceps (Hood)*

Spittal Pond Nature Reserve, Smith's, sweeping, 27-VI-88, D. Hilburn.

Known from United States and Caribbean area.

Karnyothrips melaleucus (Bagnall)*

Shelly Bay Park, Hamilton, grass, 22-VI-88, D. Hilburn & P. Stevens. Spittal Pond Nature Reserve, Smith's, sweeping, 27-VI-88, D. Hilburn.

Species reported preying on a soft scale (Pitkin, 1976:263). Known from various areas of the tropics.

Nesothrips lativentris (Karny)*

'Windy Bank Farm,' Smith's, *Bromus* sp., 22-VI-88, D. Hilburn, P. Stevens & S. Nakahara. Horseshoe Bay, Southampton, sweeping grasses, 24-VI-88, D. Hilburn. 'St. Mark's Church,' Smith's, *Gladiolus* sp., 24-VI-88, D. Hilburn & S. Nakahara. Botanical Gardens, Paget, sweeping, 26-VI-88, D. Hilburn.

A widespread species feeding on fungal spores in the tropics.

Stephanothrips occidentalis Hood & Williams

Waterston, 1940:7, 1941:51.

On leaves of *Sabal bermudana* in 1933.

Species known from Caribbean Islands, Mexico, India, South Africa, Australia and US (Florida, Hawaii).

THRIPIDAE

Anisopilothrips venustulus (Priesner)

Wilson, 1975:32.

Quarantine interception at New York City; *Duranta repens*, 1-II-36, Field & Kostal. Gilbert Nature Reserve, Sandy's, leaves of unknown tree, 20-VI-88, D. Hilburn & S. Nakahara.

Species known from the US (Florida), West Indies, Surinam, Fiji and Taiwan.

Asprothrips seminigricornis (Girault)*

Gilbert Nature Reserve, Sandy's, leaves of unknown tree, 20-VI-88, D. Hilburn & S. Nakahara.

A species with disjunct distribution and unknown origin; known from Australia, Hawaii, and New York state in greenhouse.

Caliothrips insularis (Hood)*

Botanical Gardens (in greenhouse), Paget, *Stenotaphrum secundatum* var. *floratum,* 16-XII-86, D. Hilburn; sweeping, 26-VI-88, D. Hilburn.

Species known from the Caribbean area, Panama and Brazil.

Chirothrips spiniceps Hood*

Ferry Point Park, St. George's, grass, 24-VI-88, D. Hilburn. An endemic species in the conterminous United States.

Dendrothripoides innoxius (Karny)*

Bermuda, *Ipomoea* sp. leaves, 28-VIII-50, F. D. Bennett. Gilbert Nature Reserve, Sandy's, grass, 20-VI-88, D. Hilburn & S. Nakahara.

Reported causing moderate damage to lettuce and yams (*Dioscorea* sp.) and moderate to considerable damage to sweetpotato shoots in Hawaii (Wilson 1975:104). Species known also from Central and South America, West Indies, India and Australia.

Dorcadothrips caespitis Priesner*

'Windy Bank Farm,' Smith's, *Bromus* sp., 22-VI-88, D. Hilburn, P. Stevens & S. Nakahara. Shelly Bay Park, Hamilton, grass, 22-VI-88, D. Hilburn & P. Stevens.

A species with disjunct distribution; known from Hawaii, Egypt, Sudan, Uganda and India.

Echinothrips americanus Morgan

Ogilvie, 1928:29.

Bermuda, greenhouse plants, VII-27, L. Ogilvie. Paget, *Phaseolus vulgaris,* 24-VI-88, D. Hilburn & S. Nakahara. Botanical Gardens, Paget, sweeping, 26-VI-88, D. Hilburn.

Endemic species in conterminous United States.

Frankliniella bispinosa (Morgan)*

Agricultural Station, *Gladiolus* sp., 15-VI-32, T. A. Russell. 'Waterville' area, Paget, *Lonicera* sp., *Pimenta officinale,* 19-VI-88; S. Nakahara. Par La Ville Park, Hamilton, Pembroke, *Agapanthus africana, Brunfelsea americana,* 19-VI-88, S. Nakahara. Admiralty House Park, Pembroke, *Borrichia arborescens,* 20-VI-88, S. Nakahara. 'Locust Hall,' Devonshire, *Antirrhinum majus, Brassica* sp., 21-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Ferry Point Park, St. George's, *Cakile lanceolata,* 24-VI-88, S. Nakahara.

Quarantine interceptions at New York City from 1935 to 1947 on *Antirrhinum majus,* asters, *Dianthus caryophyllus, Freesia* sp., *Gerbera* sp., lily, *Lilium harissi, Hibiscus* sp., *Melia azedarach, Nerium oleander, Rosa* sp., *Tagetes* sp.; specimens deposited in the USNM. Species known from southeastern United States, and Bahama Islands.

Frankliniella cephalica (Crawford)

Waterston, 1940:6, 1941:6, 23, 28, 31, 35–36, 49, 56.

Stoke's Point Nature Reserve, St. George's, *Bidens pilosa,* 25-III-88, M. B. Stoetzel & D. Hilburn. 'Waterville' area, Paget, *Bidens* sp., 19-VI-88, S. Nakahara. Spittal Pond Nature Reserve, Smith's, *Bidens* sp., *Pluchea* sp., unknown composite, 21-VI-88, P. Stevens, D. Hilburn & S. Nakahara.

According to Waterston (1940, 1941), this species was intercepted in the US in 1936 and 1937 on *Antirrhinum majus, Dianthus* sp., *Freesia refracta, Gerbera jamesoni, Gladiolus* sp., *Hibiscus rosa-sinensis, Lathyrus odoratus, Lilium longiflorum* var. *eximium, Nerium oleander, Rosa* spp., *Tagetes* spp. Some of these records apparently are misidentifications of *F. bispinosa.* Species known from southern US, Caribbean Islands and Central America.

Frankliniella cubensis Hood

Waterston, 1941:28.

Intercepted in the United States in 1939 on *Gerbera jamesoni.* Species known from Cuba and several islands in the Caribbean.

Frankliniella hemerocallis Crawford*

Botanical Gardens, Paget, *Hemerocallis* sp., 23-VI-88, D. Hilburn, S. Nakahara & P. Stevens.

Species is recorded from Japan and US (Florida, Maryland, New York and Wisconsin) on daylily.

Frankliniella insularis (Franklin)

Ogilvie, 1928:29; Waterston, 1941:6, 10, 20, 23, 28, 31, 35-36, 38, 42, 44, 49, 57.

Experiment Station, hibiscus flowers, 13-XII-24, L. Ogilvie. Hamilton, Pembroke, *Ipomoea villosa,* 23-III-88, M. J. Mello. Botanical Gardens, Paget, pan trap, 27-III-88, M. Stoetzel. 'Waterville' area, Paget, *Carpobotrus edulis, Chrysanthemum frutescens, Duranta repens, Ipomoea villosa, Lonicera* sp., *Malvaviscus arboreus, Pimenta officinale,* 19-VI-88, S. Nakahara. Pomander Road, Paget, *Hibiscus rosa-sinensis,* 19-VI-88, S. Nakahara. 'Garthowen Estate,' Devonshire, *Dianthus caryophyllus,* 22-VI-88, S. Nakahara. Jubilee Road, Devonshire, *Clerodendron* sp., 22-VI-88, D. Hilburn, P. Stevens & S. Nakahara. Botanical Gardens, Paget, *Canna* sp., *Lagerstroemia indica, Magnolia grandiflora, Punica granatum, Rosa* sp., 23-VI-88, D. Hilburn & S. Nakahara.

According to Waterston (1941), this species was intercepted in the US during 1932, 1933, 1935–1936, and 1938–39, or collected in Bermuda on *Antirrhinum majus, Bougainvillea spectabilis, Codiaeum variegatum, Dianthus* sp., *Gerbera jamesoni, Gladiolus* sp., *Hibiscus rosa-sinensis, Lathyrus odoratus, Lilium longiflorum* var. *eximium, Magnolia grandiflora, Nerium oleander, Passiflora incarnata, Rosa* sp., and *Vicia faba.*

Species known from tropical and subtropical areas of the New World.

Heliothrips haemorrhoidalis (Bouché)

Ogilvie, 1928:28; Waterston, 1941:20.

Bermuda Agriculture Station, *Codiaeum* sp., 1-IX-34, T. A. Russell. Bermuda, *Acalypha* sp., 10-VIII-53, I. W. Hughes; *Acalypha wilkesiana,* 6-X-50, F. D. Bennett; *Persea americana,* 23-VII-82, K. D. Monkman. 'Waterville' area, Paget, *Viburnum* sp., 19-VI-88, S. Nakahara. Admiralty House Park, Pembroke, *Acalypha wilkesiana, Cyrtomium falcatum,* 20-VI-88, D. Hilburn. Spittal Pond Nature Reserve, Smith's, *Schinus terebinthifolius,* 21-VI-88, S. Nakahara & P. Stevens. 'Garthowen Estate,' Devonshire, *Persea americana,* 21-VI-88, D. Hilburn. Botanical Gardens, Paget, *Rosa* sp., 23-VI-88, P. Stevens & S. Nakahara.

According to Waterston (1941) this species was intercepted in the United States in 1923 on *Codiaeum variegatum.* A widespread pest of various fruit and ornamental plants in the tropics and subtropics, and a pest in greenhouses in temperate areas.

Hercinothrips bicinctus Bagnall

Waterston, 1940:7, 1941:51.

Bermuda, banana fruit, 28-VI-50, F. D. Bennett. Intercepted in predeparture quarantine inspection at Bermuda: *Passiflora* sp. flower, 11-IV-69, J. Fons. Spittal Pond Nature Reserve, Smith's, *Ipomoea villosa,* 21-VI-88; P. Stevens & S. Nakahara. Botanical Gardens, Paget, Araceae, *Citharexylum spinosum, Scindapsus aureus,* 23-VI-88, D. Hilburn & S. Nakahara; sweeping, 26-VI-88, D. Hilburn.

Waterston reported that this species was collected in 1933 on leaves of *Sabal bermudana.*

Known from tropical areas of Africa, Asia and Australia, *H. bicinctus* is a banana pest in the tropics, and a minor pest in greenhouses in temperate areas (Wilson, 1975:156).

Hercinothrips femoralis (Reuter)

Heliothrips femoralis Reuter: Ogilvie, 1928:28; Waterston, 1941:32, 40.

Bermuda, greenhouse plant, VII-27, L. Ogilvie; banana fruit, 28-VI-50, F. D. Bennett. Botanical Gardens, Paget, pan trap, 27-III-88, M. B. Stoetzel; Araceae, 23-VI-88, D. Hilburn & S. Nakahara. Gilbert Nature Reserve, Sandy's, *Citharexylum spinosum,* grass, leaves of unknown tree, 20-VI-88, D. Hilburn & S. Nakahara. Seymour Pond, Southampton, *Allium cepa* leaves, 20-VI-88, D. Hilburn & S. Nakahara.

Waterston reports it from *Ipomoea cathartica* and *Musa cavendishii.* Widespread species in the tropics and subtropics and in greenhouses in Europe and the United States.

Microcephalothrips abdominalis (D. L. Crawford)*

Quarantine interception at New York City; *Zinnia* sp., 2-IX-49, Chapman & Trafford. Pomander Road, Paget, *Wedelia trilobata,* 19-VI-88, S. Nakahara. 'Waterville' area, Paget, *Bidens* sp., 19-VI-88, S. Nakahara. Spittal Pond Nature Reserve, Smith's, *Bidens* sp., *Borrichia arborescens, Pluchea odorata,* 21-VI-88, P. Stevens & S. Nakahara. Botanical Gardens, Paget, *Tagetes* sp., *Salvia farinacea,* 23-VI-88, S. Nakahara. Horseshoe Bay, Southampton, *Solidago* sp., 24-VI-88, S. Nakahara.

Species known from the New World, Hawaii and the Orient.

Neohydatothrips portoricensis (Morgan)*

Seymour Pond, Southampton, *Allium cepa,* 20-VI-88, D. Hilburn & S. Nakahara. 'Locust Hall,' Devonshire, *Ipomoea batatas,* 21-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Botanical Gardens, Paget, sweeping, 26-VI-88, D. Hilburn.

Known from Puerto Rico, Lesser Antilles and South America.

Plesiothrips perplexus (Beach)*

Paget, *Phaseolus vulgaris,* 24-VI-88, D. Hilburn & S. Nakahara. Spittal Pond Nature Reserve, Smith's, sweeping, 27-VI-88, D. Hilburn.

A New World species known also from Hawaii, Guam and several South Pacific Islands.

Rhamphothrips pandens Sakimura*

'Garthowen Estate,' Devonshire, *Sambucus* sp., 22-VI-88; S. Nakahara.

A species with disjunct distribution; known from Brazil, Jamaica, Florida, Hawaii, and several South Pacific Islands.

Selenothrips rubrocinctus (Giard)

Waterston, 1940:7, 1941:10.

'Waterville' area, Paget, *Viburnum* sp., 19-VI-88, S. Nakahara. Spittal Pond Nature Reserve, Smith's, *Coccoloba uvifera, Schinus terebinthifolius,* 21-VI-88, P. Stevens & S. Nakahara. Shelly Bay Park, Hamilton, *Tamarix* sp., *Schinus terebinthifolius,* 22-VI-88, D. Hilburn, P. Stevens & S. Nakahara. Botanical Gardens, Paget, *Citharexylum spinosum, Scindapsus aureus, Schinus terebinthifolius,* 23-VI-88, D. Hilburn & S. Nakahara. Ferry Point Park, St. George's, *Schinus terebinthifolius,* 24-VI-88, S. Nakahara.

According to Waterston, this species was intercepted in the United States on *Bougainvillea spectabilis* in 1932 from Burmuda. A serious pest of cacao, cashew and mango plants (Wilson 1975:234). It occurs in tropical and subtropical areas of the New World, Southeast Asia and Africa.

Taeniothrips eucharii (Whetzel)

Physothrips eucharii Whetzel, 1923:30; Ogilvie, 1928:29; Waterston, 1941:25; *Taeniothrips eucharii* (Whetzel): O'Neill, 1962:400.

Paget, East Bermuda, *Eucharis* (lily), II-22, H. H. Whetzel. Waterston (1941) reports it from *Eucharis grandiflora.* Quarantine interceptions at United States ports of entry from Bermuda on *Amaryllis,* carnations, cutflowers, easter lily, *Freesia, Hibiscus* and *Lilium* deposited in the USNM.

An Oriental species known from Japan, China and southeastern United States, infesting mainly bulbs, leaves and flowers of Amaryllidaceae.

Thrips hawaiiensis (Morgan)*

Botanical Gardens, Paget, pan trap, 27-III-88, M. B. Stoetzel. 'Waterville' area, Paget, *Chrysanthemum frutescens, Carpobotrus edulis, Duranta repens, Ipomoea villosa, Lonicera* sp., *Nasturtium officinale, Pimenta officinale,* 19-VI-88, S. Nakahara. Par La Ville Park, Hamilton, Pembroke, *Agapanthus africana, Brunfelsea americana,* 19-VI-88, S. Nakahara. Admiralty House Park, Pembroke, *Leucaena glauca, Solidago* sp., 20-VI-88, S. Nakahara. Gilbert Nature Reserve, Sandy's, *Carissa grandiflora,* 20-VI-88, D. Hilburn & S. Nakahara. 'Locust Hall,' Devonshire, *Antirrhinum majus,* grass, *Lantana* sp., 21-VI-88, D. Hilburn, P. Stevens, & S. Nakahara. Spittal Pond Nature Reserve, Smith's, *Bidens* sp., *Borrichia arborescens, Carissa grandiflora,* 21-VI-88, P. Stevens & S. Nakahara. 'Garthowen Estate,' Devonshire, *Dianthus caryophyllus, Sambucus* sp., 22-VI-88, S. Nakahara. Jubilee Road, Devonshire, *Clerodendron* sp., 22-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Botanical Gardens, Paget, *Abelia* sp., *Citharexylum spinosum, Hemerocallis* sp., *Lagerstroemia indica, Magnolia grandiflora, Rosa* sp., *Salvia farinacea,* 23-VI-88, P. Stevens, D. Hilburn & S. Nakahara. Ferry Point Park, St. George's, *Jasminum* sp., 24-VI-88, S. Nakahara. Paget, *Phaseolus vulgaris,* 24-VI-88, D. Hilburn & S. Nakahara.

Species known from the Orient, Pacific Islands and southern United States. Damages coffee, mango, citrus, apple, pear, passion fruit, rose and banana, and is a beneficial pollinator of certain flowers in India (Palmer and Wetton, 1987:397).

Thrips simplex (Morison)

Taeniothrips simplex Morison: Waterston, 1940:7, 1941:29, 31.

Devonshire, 26-V-32, T. A. Russell; *Gladiolus,* 14-II-33, T. A. Russell; *Gladiolus,* 24-II-33, T. A. Russell. Bermuda Agriculture Station, *Gladiolus,* 15-VI-32, T. A. Russell; 22-VI-32, T. A. Russell. Paget Marsh, Paget, *Sabal bermudana,* 24-I-33, T. A. Russell.

Waterston (1941) lists *Gladiolus* sp. and *Hippeastrum vittatum* as hosts. A cosmopolitan pest of gladiolus.

Thrips tabaci Lindeman

Ogilvie, 1928:29; Waterston, 1940:7, 1941:4.

Bermuda Agriculture Station, *Brassica oleracea,* 24-II-33, T. A. Russell. Trimingham Hill, Paget, *Brassica oleracea,* 24-III-88, M. B. Stoetzel, D. Hilburn & M. J. Mello. 'Waterville' area, Paget, *Chrysanthemum frutescens, Pimenta officinale,* 19-VI-88, S. Nakahara. Par La Ville Park, Hamilton, Pembroke, *Agapanthus africana,* 19-VI-88, S. Nakahara. Admiralty House Park, Pembroke, *Solidago* sp., 20-VI-88,

S. Nakahara. Seymour Pond, Southampton, *Allium cepa,* 20-VI-88; D. Hilburn & S. Nakahara. Spittal Pond Nature Reserve, Smith's, *Carissa grandiflora,* 21-VI-88, P. Stevens & S. Nakahara. 'Locust Hall,' Devonshire, *Brassica* sp., grass, 21-VI-88, P. Stevens, D. Hilburn & S. Nakahara. 'Garthowen Estate,' Devonshire, *Allium cepa,* 22-VI-88, D. Hilburn; *Dianthus caryophyllus, Sambucus* sp., 22-VI-88, S. Nakahara. Shelly Bay Park, Hamilton, *Foeniculum vulgare,* 22-VI-88, S. Nakahara. Botanical Gardens, Paget, *Canna* sp., 23-VI-88, S. Nakahara & D. Hilburn. Ferry Point Park, St. George's, *Cakile lanceolata,* 24-VI-88, S. Nakahara.

Reported by Waterston (1941) on *Allium cepa, A. porrum* and *Brassica oleracea.* A cosmopolitan pest of onions and other plants and a vector of tomato spotted wilt virus.

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